From: Mike Wade
Sent: Monday, November 10, 2003 4:15 PM
To: Guivetchi, Kamyar; Dabbs, Paul
Cc: Lisa Beutler
Subject: Ag Caucus Draft Overview

Attached is a revised California Water Plan Overview from the Ag Caucus. This is rewritten to reduce the negative tone perceived in the earlier version released to the AC.

In addition, I am sending via regular mail comments received from Bill DuBois and Alex Hildebrand on various parts of the chapters and executive summary. If you have any questions, please feel free to contact me.

Thanks

Mike Wade

B160 Revised Overview - Final ...

Overview of the Water Plan Update 2003

Water is California's lifeblood. Safe, adequate and sustainable water supplies are essential to provide for our growing population, to preserve our ability to provide a safe and adequate supply of food and fiber, to maintain a healthy economy, and enhance our natural environment. Unless we plan now for the future and implement a prudent water resources investment strategy, Californians will experience a significant reduction in the quality of our lives, environment and economy.

This update of the California State Water Plan identifies numerous water resources actions that are aimed at assuring an adequate, reliable and sustainable water supply for the full range of beneficial uses out to the year 2030. By that time population is expected to increase by 17 million to a total of 52 million (about 50% more people than we have today). The need to sustain our production of farm products to feed this population will be of vital importance. Unsustainable groundwater overdraft in the state runs from one to two million acre-feet per year. In dry years the shortages are much larger. Calls for increasing the amount of water dedicated to protecting and enhancing the environment, combined with the needs identified above, will add to the stresses and strains on the state's developed water system.

The first challenge in developing this update of the Water Plan was dealing with the uncertainties that surround California's water future. Although specific supply figures are difficult to predict from year-to-year, it is quite certain that California's currently developed water resources are insufficient to meet all future demands. Potential impacts on California's water supply brought about by international trade agreements, climate change, environmental regulations and other factors could significantly change both the amount of water available and the amount of water needed. Without question, the amount of water required to meet the state's future needs will be greater than at present.

In the past when the State's population was lower, California's water system had sufficient flexibility to provide for most needs during times of drought, even extended droughts. That is no longer true. The recent 1987-92 drought demonstrated that the State's current water system is unable to protect consumptive and environmental uses from serious harm if and when another extended drought occurs.

Balanced portfolio of water management strategies to meet needs.
California is able to meet many, but not all of its water demand in most years. Insufficient developed surface water supplies have caused water users to rely on groundwater to meet demands during most years. The year 2000 was a year with average precipitation in most areas of the state. Urban uses by the 35 million Californians totaled X million acre-feet; agriculture used about XX million acre-feet, with the balance of the State's supply going to meet environmental water demands. As a result, groundwater overdraft in the amount of X million acre-feet was needed to meet full urban and agricultural demands. Even in wet years such as 1998, groundwater overdraft occurs in large areas of the state.

Each year our population increases by about 600,000 people. This means that by the year 2030 we will add another 17 million to our current population of 35 million. The state will need an additional 2 to 3 million acre-feet to provide for their water use, if the new Californians were to use currently available efficiency technologies (e.g., ultra low flow toilets, showerheads, etc.). This is a best-case scenario. Add the current 1 to 2 million acre-feet of unsustainable groundwater overdraft, and the state needs 3 to 5 million acre-feet of additional water each and every year to meet its future consumptive needs. Additional water may be needed to restore degraded ecosystems. Without this additional water, groundwater overdraft could worsen, aquatic environments could be further stressed, and agriculture's ability to produce a reliable, affordable domestic supply of food for our urban population could suffer.

The State and the Advisory Committee have identified numerous water management strategies that can be implemented both at the State and regional levels to improve the water supply outlook. These include, among other strategies, improving water use efficiency in both the agricultural and urban sectors, modifying the operation of the existing water supply systems, water recycling, and expanding groundwater storage and conjunctive use programs.

Comment: Banks 8,500 plus others?

Additional surface water storage, especially those being pursued by the California Bay-Delta Authority, was also identified as important for the state to evaluate for future implementation. These will be pursued for implementation if they meet technical, environmental and economic criteria. Although these projects are designed to achieve ecosystem and water quality objectives, they may also provide operational flexibility to increase the state's useable water supply. Other surface storage projects may be evaluated in the long-term.

Comment: Ecosystem benefits in the Delta may enable export pumps to operate at increased capacity, capturing Delta outflow that would otherwise be lost.

The State is also committed to its role in implementing the California Bay-Delta Authority's various programs, as specified in the CALFED Bay-Delta Program's Record of Decision. These programs include projects aimed at improving water supplies, conveyance, water quality, watershed health, the Bay-Delta ecosystem, and water use efficiency. Particularly important are those actions identified for implementation during Stage 1 of the Bay-Delta Program (first seven years). These will set the stage for additional improvements during the remainder of the 30-year Program.

Other strategies are likely to mature in the next three decades. These include ocean water desalination and additional weather modification.

Comment: Is this cloud seeding?

Populations of aquatic species of concern (e.g., Winter run salmon, Delta smelt) have been rebounding after plummeting during the 1987-92 drought. The Bay-Delta Program's early emphasis on ecosystem restoration has played a significant role in this recovery. Particularly exciting has been the Bay-Delta Program's findings on the impacts of targeted ecosystem restoration activities in achieving fishery population benefits. It is becoming clearer that restrictions at the export pumps of the SWP and CVP may be less important in achieving these benefits, leading to improved water supply reliability.

Emphasis on regional planning

The reality of current and future water planning is that projects are primarily being designed and implemented at the regional level. Thus this Water Plan emphasizes regional planning, and acknowledges the State's role in realizing the potential of regional efforts.

Grant and loan applications that the State has received for various water supply enhancement and demand reduction projects indicates that most projects today are designed to achieve multiple benefits. Cost-effectiveness can be difficult to evaluate for multi-benefit projects. However, the challenges the State faces in providing a safe, adequate and reliable water supply, coupled with the interconnectedness of the State's developed water systems, demands that multiple benefit strategies be pursued for implementation.

Included in this Water Plan are 25 categories of strategies for meeting human and environmental water needs. These are characterized on Table 1 ("Implementation Plan and Investment Guide") as short-, medium- and long-term investments. Included in each description is how much water or other benefits can be achieved on a statewide basis and how much it costs. The State estimates it will have to spend about $1 billion annually (in addition to federal and local cost shares) in order to achieve the full range of benefits identified in Table 1. This does not include funds needed for maintenance of the existing water infrastructure.

The range of implementation of any individual strategy will be unique for each region of the State, and will depend on numerous factors, such as cost-effectiveness, applicability, implementability and regional goals. Maximum flexibility and sustainability is achieved when regions diversify their water portfolios. This is a key concept in the Water Plan. Resource managers are encouraged to examine all of these strategies to identify the best mix for their regions. The more a region can diversify its portfolio, the more robust and resilient it will be in facing future unknowns.

As part of this approach it is also important to recognize that there are challenges associated with implementing each of these strategies. For instance, with water transfers there are concerns with third party impacts. With ocean desalination there are issues with water intakes and brine disposal. For new surface water storage projects there are questions about impacts of diversions on the rivers that would provide the water. With agricultural water conservation there are potential impacts on downstream users (agricultural, urban and environmental) that depend on return flows to meet their water supply needs.

Also, it must be recognized that implementation of some strategies will be difficult and expensive. Many strategies will need to be pursued in parallel in order to match available water supplies to demands over time. Some strategies, such as water use efficiency, will be continuously implemented throughout the span of this Plan.

All of these strategies must be evaluated completely so that the merits of each are weighed against their potential impacts. Evaluations must include a consideration of what a strategy has to offer in terms of supply reliability, system flexibility and yield in order to determine its priority for implementation. This is wise fiscal policy.

Comment: Cost/benefit should not be the only gauge by which a strategy is judged. The public must be allowed to choose projects that provide "insurance" for the water supply future, even if they are more expensive than other options.

In addition to identifying the issues, this Water Plan contains recommendations on ways these strategies can be implemented to minimize the impacts.

To accommodate the uncertainties with each of these strategies it is prudent to pursue, at least through the planning stages, an extra margin of water supply, demand reduction and ecosystem restoration capability.

The recommendations in this California Water Plan were prepared based on the input of a 70 member Advisory Committee composed of representatives of agriculture, urban water agencies, businesses, environmentalists, Native Americans, environmental justice advocates, cities, counties, federal and state agencies, the Bay-Delta Water Authority, academia; and different regions of the state.

Implementation Plan and Investment Guide
To Meet the State's Water Needs

Resource Management Strategy	Potential Benefits
Initial Short-Term Investments (to 2010)	
Agricultural Water Use Efficiency	A, B, E, K, T
Conveyance	
• SWP/CVP Intertie (CALFED)	L, M
• H.O. Banks 8,500 cfs (CALFED)	B, L, M, T
• Screened Intake Clifton Court (CALFED)	D, L, M
• Joint Point of Diversion (CALFED)	B, L, M
• Reduce Agricultural Drainage in Delta (CALFED)	E, T, U
• Improved Delta Cross Channel Operations Procedures (CALFED)	G
• San Felipe Unit Bypass (CALFED)	L, T
Desalting (brackish water)	J, K
Ecosystem Restoration (CALFED)	
• Habitat Restoration (CALFED)	C, D, L, M
• Fish Passage Improvements (CALFED)	A, C
• Invasive Species Program (CALFED)	F
• Environmental Water Account (CALFED)	A, B, M
Floodplain Management	C
Recycling (municipal water)	J, K
Science (CALFED)	A, B, C, L, M
Storage	
• Groundwater (CALFED)	A, B, K, L, T
• Conjunctive Management (CALFED)	A, B, K, L, T
• Groundwater (Local)	A, B, K, L, T
• Conjunctive Management (Local)	A, B, K, L, T
System Reoperation	
• Napa Agreement	B, J, L
Urban Runoff Management	J, T
Urban Water Use Efficiency	J, K
Watershed Management (CALFED)	A, C, E, J, T
Water Transfers	
• Governor's Drought Contingency Plan	K
• Phase 8 Agreement (short-term)	J, L
• Water quality exchanges (CALFED)	T
Additional Medium-Term Investments (to 2020)	
Conveyance	
• Permanent Operable Barriers	A, J, T
Desalination (ocean water)	J, K, L
Precipitation enhancement	A, J
Recycling	
• Bay Area Blending Program (CALFED)	J, K, M
Storage	
• Delta Wetlands (CALFED)	B, C, L
• Sites Reservoir (CALFED)	A, B, J, L, T
• Enlarged Los Vaqueros (CALFED)	L, M, T
• Expanded Groundwater Storage (CALFED)	A, B, K, L, T

• Expanded Groundwater Storage (Local)	A, B, K, L, T
System Reoperation	
• System Wide Conjunctive Management	B, J, L
Water Transfers	
• Phase 8 Agreement (long-term)	J, L, T
• Expanded Dry Year Transfers	J, L, T
Additional Long-Term Investments (to 2030)	
Additional Conjunctive Management	
Storage	
• Upper San Joaquin (CALFED)	A, B, J, L, T
• Enlarged Lake Shasta (CALFED)	A, B, J, L, T

Key – Potential Benefits		
Environmental	**Water Supply**	**Water Quality**
A – Instream flows	J – Annual supply	T – Source quality
B – Flow timing	K – Drought supply	U – Reduced pollution
C – Habitat improvements	L – System Flexibility	
D – Reduced predation	M – System Reliability	
E – Flow quality		
F – Reduced competition		
G – Increased survival		